

3.39um Low-Power Benchtop ICL-DFB Tunable Continuous-Wave Laser (Benchtop Light Source)



● Product Description

This is a tunable continuous-wave laser developed by Ideal Photonics. It features a narrow linewidth, high power, and low power consumption, making it ideal for gas sensing applications, particularly for testing hydrocarbons and other related gases. The benchtop ICL-DFB laser module integrates a driver and temperature control module, and it allows software control of the laser's temperature and operating current, ensuring stable

operation and maintaining measurement accuracy. Additionally, the laser module includes an FPGA, facilitating the processing of gas concentration measurements.

● Product features

Continuous wave、 Single-mode spectrum、 Tunable light source、 Low power consumption、 High-quality beam、 Narrow linewidth、 Software intelligent control、 Compact size

● Part Number

MP-ICL-3390-DFB-5-B

● Application area

TDLAS gas system measurement setup、 Mid-infrared system light source、 Mid-infrared device analysis

● Core parameters

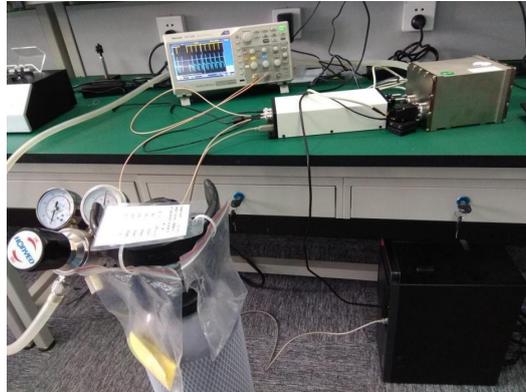
Wavelength	Output Power	Spectral Width
3.39um	5mW	3MHz

● General Parameters

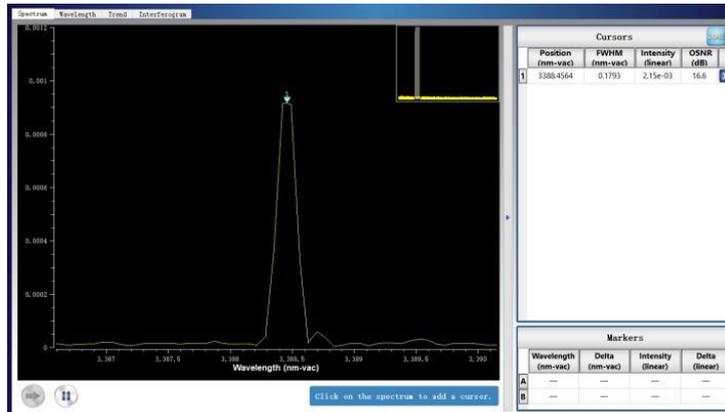
Parameters

Parameter	Unit	Specs		
		Min.	Typ.	Max.
Laser Output Power	mW	0.5	5	8
Peak Operating Wavelength	um		3.39	
Spectral Width (FWHM)	MHz		3	
Side Mode Suppression Ratio (SMSR)	dB		20	30
Wavelength Tuning Range	nm	6	10	25
Wavelength Temperature Coefficient	nm/°C		0.32	
Wavelength Current Coefficient	nm/mA		0.06	
Output Power Stability (8h)	%		±1	±4
Output Power Adjustable Range	%	0		100
Operating Current	mA	40	80	140
Threshold Current	mA	25	40	80
Operating Voltage	V	7	9	12
Chip Operating Temperature	°C	-20	10	40
Storage Temperature	°C	15	20	65
Dimensions	mm	340(L) × 240(W) × 100(H)		

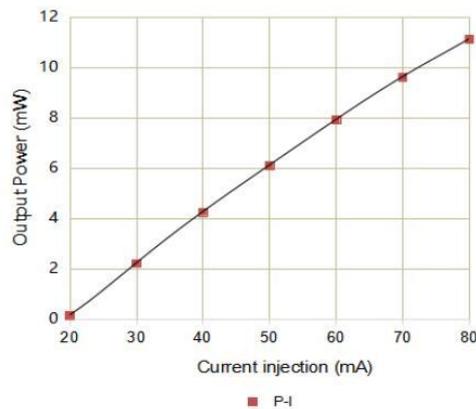
System Setup Diagram



Spectral Diagram (15°C, 80mA)

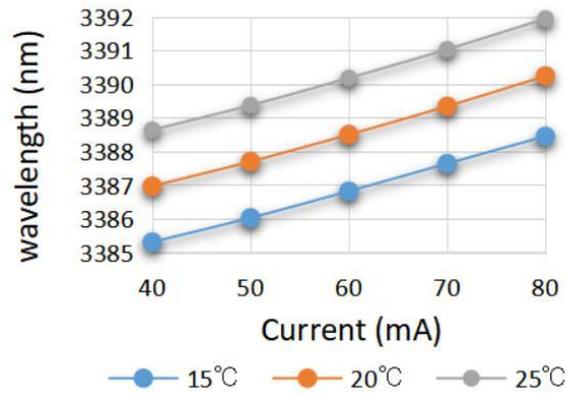


Power Curve (15°C)

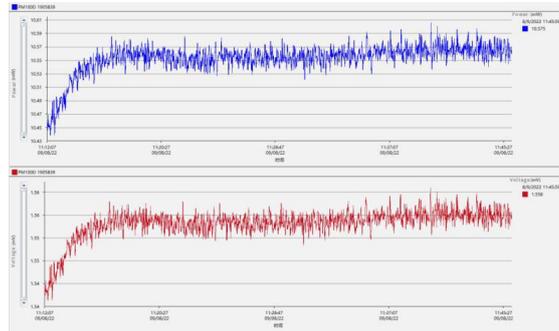


Wavelength Tuning Curve

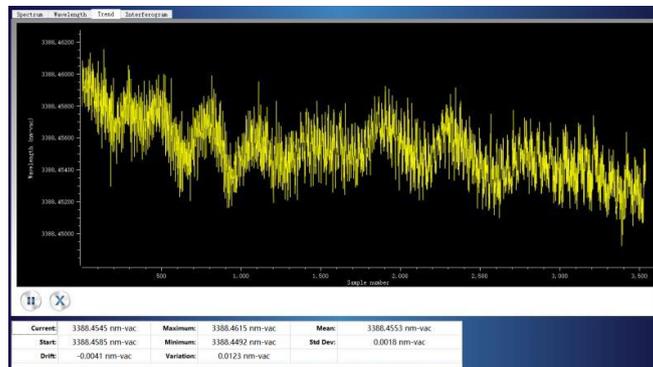
Tuning Characteristics



Power Stability (15°C, 80mA)

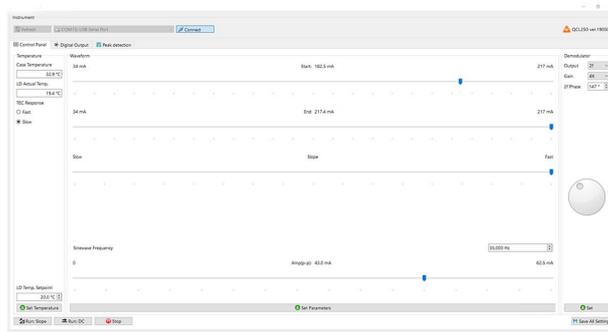


Wavelength Stability (15°C, 80mA)

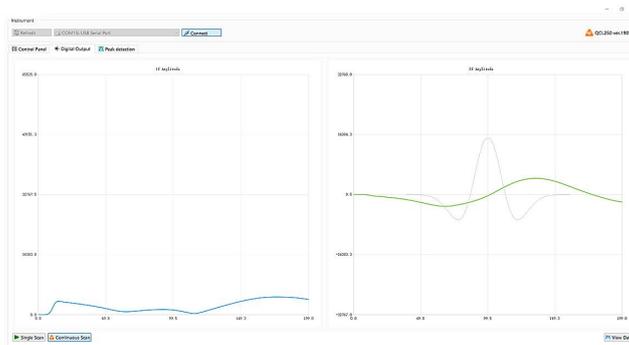




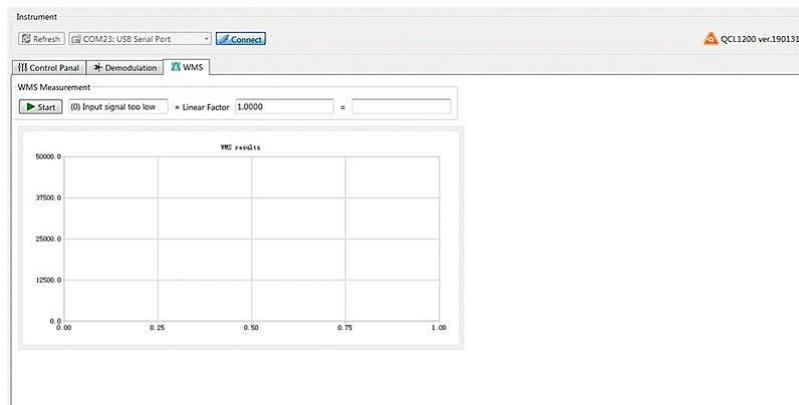
Control Software



2F Signal Acquisition Interface

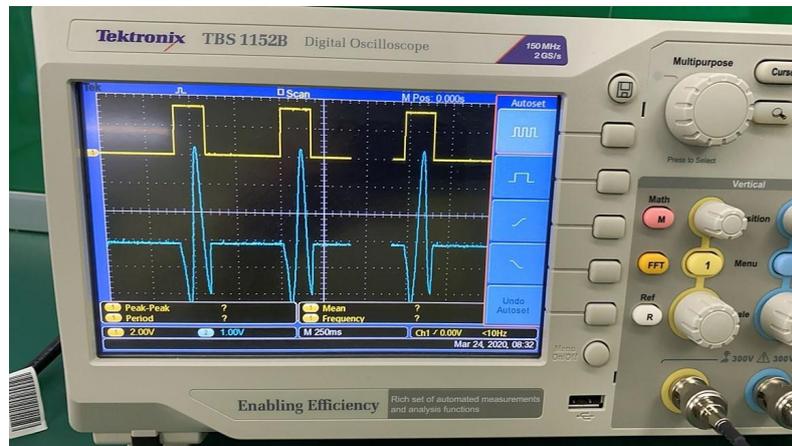


Algorithm Calibration Interface





Modulation Signal Linearity Test (Oscilloscope Voltage Signal Effect Diagram)



Ordering info

MP-ICL-3390-3-DFB-05

Central Wavelength:

3390: 3.39 μm

Bandwidth:

3: 3MHz

Output Power:

05: 5mW